



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/825,431 | 04/16/2004 | Hiroshi Ishii | 252017US2 | 9890 |

22850 7590 06/09/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

| |
|----------|
| EXAMINER |
|----------|

GRAINGER, QUANA MASHELL

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2852

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

cm

Office Action Summary

Application No.

10/825,431

Applicant(s)

ISHII ET AL.

Examiner

Quana M. Grainger

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2852

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 8-10-2004 was considered by the examiner.

Drawings

3. The content of the drawings are approved by the examiner

Title

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2852

6. Claims 1, 9-14, 18, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Furusawa et al (JP11-352743a). The image forming apparatus by Furusawa et al. comprises a plurality of imaging units; a loading unit formed on a top face of a main body of the image forming apparatus; a discharging unit disposed at an operation side of the main body, wherein an image-formed recording medium is discharged through the discharging unit to the loading unit; and a plurality of developer containing members disposed in the main body, the developer containing members being arranged in a direction extending from the operation side of the main body, and the developer containing members providing the corresponding imaging units with developer; wherein the developer containing members are detachable from the main body of the image forming apparatus, and can be handled in a space above the image forming apparatus (abstract).

7. Claims 1- 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Mochimaru et al (2002/0051646). The image forming apparatus by Mochimaru et al. comprises a plurality of imaging units; a loading unit 40 formed on a top face of a main body of the image forming apparatus; a discharging unit disposed at an operation side 34 of the main body, wherein an image-formed recording medium is discharged through the discharging unit to the loading unit; and a plurality of developer containing members TC disposed in the main body, the developer containing members being arranged in a direction extending from the operation side of the main body, and the developer containing members providing the corresponding imaging units with developer; wherein the developer containing members are detachable from the main body of the image forming apparatus, and can be handled in a space above the image forming apparatus (Figure 12). The developer containing member becomes distant from the operation side, the

Art Unit: 2852

developer containing member is disposed at a higher position (Figure 12). The loading unit can be opened around a rotative center unit disposed at a position beyond the developer containing members (40A, 40B). The rotative center unit is disposed at a position lower than a highest portion of the developer containing member that is most distant from the discharging unit 40B. The rotative center unit includes an axle unit provided in the main body, the axis of the axle unit being in width directions of the main body, and a bearing unit provided in the loading unit, the bearing unit being supported by the axle unit (Figure 12, 40B).

Mochimaru et al. also teaches the loading unit can be opened in directions extending from and approaching to the operation side. The image forming apparatus further comprising an operations panel disposed on a facing of the main body positioned at the operation side of the image forming apparatus; wherein the loading unit can be rotatively opened to a position higher than the facing on which the operations panel is disposed (Figures 3, 12). The highest portion of the loading unit is as high as a highest portion of the facing on which the operations panel is disposed (Figure 3). The image forming wherein a lowest portion of the loading unit is lower than a highest portion of the developer containing member disposed at a lowest position (Figure 12). The image forming apparatus further comprising a paper feeding cassette detachably provided in the main body, the paper feeding cassette storing a recording medium on which an image is to be formed 26. The paper feeding cassette can be attached to and detached from the main body in directions extending from and approaching to the operation side of the main body (Figure 3). The image forming apparatus further comprising an openable tray 35 provided on the main body, on which a recording medium can be stacked; wherein the loading unit and the openable tray can be opened within a range of a width of the main body. The openable tray 35

Art Unit: 2852

can be opened backward from the operation side. The loading unit is a portion of a facing of the main body covering the developer containers (Figure 12).

The surface of the loading unit is slanted in a substantially same manner as the developer storage members are slanted (Figure 12). The imaging units are disposed at a slant in the same direction as the developer containing members; and a surface of the loading unit is formed at a slant in the same direction as the imaging units (Figure 12). The image forming apparatus further comprises an intermediate transfer unit disposed at a slant substantially in the same direction as the developer containing members; wherein an image formed by the imaging units is transferred to the intermediate transfer unit, and a surface of the loading unit is formed at a slant in the same direction as the intermediate transfer unit. The Image forming apparatus further comprising an optical writing unit disposed at a slant in the same direction as the developer containing members, which optical writing unit writes an image on each image retaining unit using a light beam; wherein a surface of the loading unit is formed at a slant in the same direction as the optical writing unit (Figure 12). The image forming apparatus further comprising an optical writing unit 7 that writes an image on an image retaining unit using a light beam; and an intermediate transfer unit to which the image formed by the imaging unit is transferred; wherein the imaging unit, the optical writing unit 7, the intermediate transfer unit 60, and a surface of the loading unit are provided at a slant substantially in the same direction as the developer containing members (Figure 12). The space required for handling the developer containing members is limited to width of the main body, the width being perpendicular to directions in which the image-formed recording medium is discharged through the discharging unit.

Mochimaru et al. teaches an image forming apparatus comprising a plurality of imaging units; a loading unit formed on a top face of a main body of the image forming apparatus; a discharging unit disposed at an operation side of the main body, wherein an image-formed recording medium is discharged through the discharging unit to the loading unit; and a plurality of developer containing members disposed in the main body, the developer containing members being arranged in a direction extending from the operation side of the main body, and the developer containing members providing the corresponding imaging units with developer; wherein the developer containing member closest to the discharging unit is disposed at a lower position than the developer containing member most distant from the discharging unit (Figure 12). The discharging unit is disposed at a higher position than the position at which the developer containing member closest to the discharging unit is disposed, and at a lower position than the position at which the developer containing member most distant from the discharging unit is disposed. The loading unit is configured in a manner in which a lowest portion thereof is lower than a discharging point of the discharging unit. The image forming apparatus further comprising: an operations panel 50 disposed on a facing of the main body positioned at the operation side of the image forming apparatus; wherein the loading unit is configured in a manner in which a highest portion thereof is substantially as high as the facing at which the operations panel is disposed. The loading unit is configured in a manner in which a lowest portion thereof is disposed at a lower position than a position at which a highest portion of a lowest one of the developer containing members is disposed. The loading unit is a portion of a facing of the main body, the portion covering the developer containing members (Figure 12).

Art Unit: 2852

The imaging units are disposed at a slant substantially in the same direction in which the developer containing members are disposed; and a surface of the loading unit is disposed at a slant substantially in the same direction in which the imaging units are disposed. The image forming apparatus further comprising an intermediate transfer unit 60 disposed at a slant substantially in the same direction as the developer containing members; wherein an image formed by the imaging units is transferred to the intermediate transfer unit, and a surface of the loading unit 40 is formed at a slant in the same direction as the intermediate transfer unit. The image forming apparatus further comprising an optical writing unit 7 disposed at a slant in the same direction as the developer containing members, which optical writing unit writes an image on each image retaining unit using a light beam; wherein a surface of the loading unit is formed at a slant in the same direction as the optical writing unit. The image forming apparatus further comprising: an optical writing unit 7 that writes an image on an image retaining unit using a light beam; and an intermediate transfer unit 60 to which the image formed by the imaging unit is transferred; wherein the imaging unit, the optical writing unit, the intermediate transfer unit, and a surface of the loading unit are provided at a slant substantially in the same direction as the developer containing members (Figure 12).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2852

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furusawa et al. in view of Hirai. Furusawa et al. does not teach discuss the discharge tray.

Hirai teaches a discharge tray that has three curved ribs. It would have been obvious to one of ordinary skill in the art at the time the invention was made use the teaching of Hirai with the image forming device of Furusawa et al. to stack discharge document on a tray without disturbing the image (Hirai; abstract: lines 1-10).

11. Claims 15-18 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochimaru et al. in view of Hirai. Mochimaru et al. does not teach discuss the structure of the discharge tray.

Hirai teaches a loading unit 110 extends from an end unit under the discharging unit to a direction extending from the discharging unit, and has a plurality of ribs 111 protruding upward thereon. The manner in which the ribs are disposed is substantially spoke-wise from a center at an end unit side of the loading unit. The quantity of the ribs is three (Figures 1, 3, 7). The image forming apparatus wherein a plurality of curves protruding upward is formed on a surface of the loading unit in width directions (Figures 1, 3, 7). The loading unit extends from an end unit

Art Unit: 2852

positioned below the discharging unit in a direction extending from the discharging unit; and a plurality of ribs are provided on the loading unit, the ribs protruding upward from a surface of the loading unit (Figures 1, 3, 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made use the teaching of Hirai with the image forming device of Mochimaru et al. to stack discharge document on a tray without disturbing the image (Hirai; abstract: lines 1-10).

Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hong et al. and Nakamura (JP06-175332a) teach pertinent discharge tray. Mochimaru et al (6,801,742) and Noguchi et al. (JP2003-202728) teaches pertinent image forming devices.

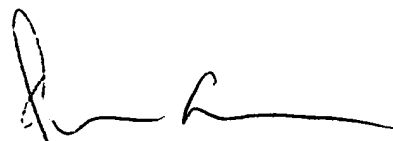
Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quana M. Grainger whose telephone number is 571-272-2135. The examiner can normally be reached on 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2852

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Quana M Grainger', with a long horizontal flourish extending to the right.

Quana M Grainger
Primary Examiner
Art Unit 2852

QG